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APPLICANT/INVENTOR

ATTORNEY/AGENCY/BOOKKEEPER
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SCANLON, P

ART UNIT
246

SEARCHER/EXAMINER

30

DATE RECEIVED

11/03/89

This is a continuation
of application No.

This application has been examined Responsive to communication filed on _____ This action is made final.

A shortened statutory period for response to this action is set to expire 3 month(s), 0 days from the date of this letter.
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

1. Notice of References Cited by Examiner, PTO-892.
2. Notice re Patent Drawing, PTO-948.
3. Notice of Art Cited by Applicant, PTO-1449.
4. Notice of Informal Patent Application, Form PTO-152.
5. Information on How to Effect Drawing Changes, PTO-1474.
6. _____

Part II SUMMARY OF ACTION

1. Claims 16, 18-20, 26-30 & 32 - 34 are pending in the application.
Of the above, claims _____ are withdrawn from consideration.
2. Claims 1-15, 17, 21-25 & 31 have been cancelled.
3. Claims 23 & 32-34 are allowed.
4. Claims 16, 18-20, 26, 27, 29 & 30 are rejected.
5. Claims _____ are objected to.
6. Claims _____ are subject to restriction or election requirement.
7. This application has been filed with Informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.
8. Formal drawings are required in response to this Office action.
9. The corrected or substitute drawings have been received on _____. Under 37 C.F.R. 1.84 these drawings are acceptable, not acceptable (see explanation or Notice re Patent Drawing, PTO-948).
10. The proposed additional or substitute sheet(s) of drawings, filed on _____ has (have) been approved by the examiner. disapproved by the examiner (see explanation).
11. The proposed drawing correction, filed on _____, has been approved. disapproved (see explanation).
12. Acknowledgment is made of the claim for priority under U.S.C. 119. The certified copy has been received not been received been filed in parent application, serial no. 513,532; filed on 7/13/83
13. Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.
14. Other

EXAMINER'S ACTION

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1. The following is a quotation of 35 U.S.C. 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) and (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

2. Claims 16 and 18-20 are rejected under 35 U.S.C. 103 as being unpatentable over Jackson in view of Soviet Patent 114,620.

Jackson discloses an immersion probe comprising substantially all of the claimed limitations. However, the protective sheath 94 of Jackson does not have a diminished thickness near the immersion end.

The Soviet reference teaches a similar immersion probe having a protective sheath which is tapered so that its thickness diminishes to a minimum thickness at the immersion end.

It would have been obvious to modify Jackson by providing a minimum thickness at the immersion end of

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the sheath as taught by the Soviet reference because this feature is shown to be desirable in the field of endeavor.

3. Claims 26 and 27 are rejected under 35 U.S.C. 103 as being unpatentable over Jackson in view of Soviet Patent 144,620 as applied to claim 16 and 18-20 above, and further in view of Norburn (3,353,808).

Jackson ^{shows} a hollow support 62 for supporting the probe. The support 62 is the same diameter of the sheath 94 but does not abut the sheath. Norburn ('808) teaches a hollow support 11 in the same field of endeavor which abuts a shoulder of a sheath 15.

It would have been obvious to modify the Jackson-Soviet reference so that the support tube abutted the sheath as taught by Norburn ('808) because this is an equivalent supporting arrangement.

4. Claims 29 and 30 are rejected under 35 U.S.C. 103 as being unpatentable over Jackson in view of Soviet Patent 144,620 as applied to claims 16 and 18-20 above, and further in view of Theuwis and Japka.

The combination of the Jackson and Soviet references does not disclose a thermocouple having a quartz tube with an aluminum oxide coating.

Theuwis teaches an immersion probe having both a thermocouple and a cell for determining oxygen content. Japka teaches a molten metal immersion

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thermocouple in which the body containing the junction is provided with a coating of aluminum oxide.

It would have been obvious to modify the Jackson-Soviet combination by including a thermocouple as taught by Theuwis in order to provide temperature measurements. Furthermore, it would have been obvious to provide an aluminum oxide coating as taught by Japka because such a coating has been shown to be desirable in the field of endeavor.

5. Claims 28 and 32-34 are allowable over the prior art of record.

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

7. Any inquiry concerning this communication should be directed to Examiner Scanlon at telephone number 703-557-9898.

P.S. 10/31
P. Scanlon/rdt
10-20-89

William A. Cuchlinski, Jr.
WILLIAM A. CUCHLINSKI, JR.
SUPERVISORY PATENT EXAMINER
ART UNIT 246